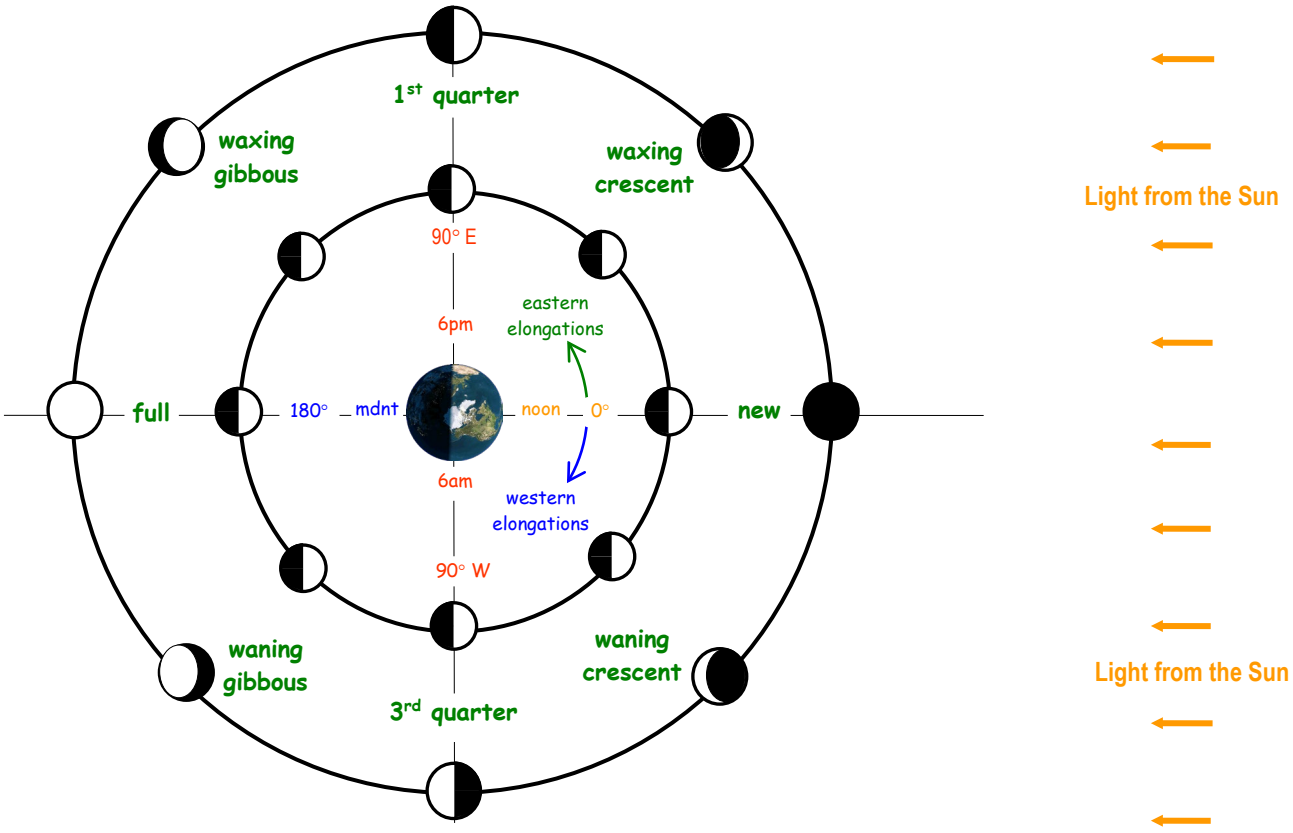
Solution
PHASES OF THE MOON

The inner circle shows the moon in its orbit, the outer circle shows how each phase appears as seen from Earth



Complete the following table for the phases of the moon, assuming a 12-hour "moon day" (phases are not in order of occurrence).[24] *THE PHASES ARE NOT IN ORDER!*

PHASE	ELONGATION	RISING TIME	TRANSIT TIME*	SETTING TIME
1st Quarter	90° E	Noon	6 pm	Midnight
Waning Gibbous	~135° W	9 pm	3 am	9 am
New	0°	6 am	noon	6 pm
Waning Crescent	~45° W	3 am	9 am	3 pm
3rd Quarter	90° W	MIDNIGHT	6 am	Noon
Waxing Gibbous	135° E	3 pm	9 pm	3 am
Full	180°	6 pm	Midnight	6 am
Waxing Crescent	45° E	9 am	3 pm	9 pm

*The "transit time" is the time when the object is on the observer's meridian